

Importance of fatty acids and their transporters for placenta development in the pig

Supervisor: Agnieszka Blitek, Prof., D.Sci.

The main goal of the project is to determine mechanisms and factors regulating the expression of fatty acid transporters in the porcine uterus and conceptus trophoblast, and to examine the role of fatty acids of ω -6 and ω -3 series during placenta formation in the pig. To achieve this goal, the following experiments are planned: (1) determination of expression profiles of both membrane and cytosolic transporters and their localization in the maternal endometrium and conceptus/trophoblast; (2) identification of factors which may regulate the expression of fatty acid transporters in the maternal endometrium; (3) determination of the role of fatty acids and their transporters in trophoblast cell function; (4) analysis of the importance of fatty acids for angiogenesis in the placenta; (5) examination whether restricted feeding of pregnant gilts during the period of conceptus implantation will affect early placenta development; in particular fatty acid transport, binding, and metabolism.

Requirements for the candidate

1. Master Thesis accomplishment – life science degree (biology, biotechnology, animal husbandry) or other related to the discipline of animal science;
2. High motivation for scientific work, good analytical and work organization skills, both individual and team work skills;
3. Knowledge in the field of biology and/or animal physiology;
4. Basic knowledge in molecular biology techniques (e.g. Real-Time PCR, Western blot) and/or cell culture methods as well as in statistical analyses;
5. Experience in studies using tissues from female reproductive tract of livestock species and/or cell lines will be an advantage;
6. Availability and willingness for gathering of the animal material for experiments; ability to work with animals;
7. Good knowledge of English (both spoken and written).

Conditions of work in the project:

1. Planned date of beginning of work in the project: 1st of October, 2022
2. Location of the workplace: Department of Hormonal Action Mechanisms, IAR&FR PAS, Bydgoska Str. 7, 10-243 Olsztyn
3. PhD scholarship: 3200 PLN/month (~2800 PLN net salary) for the first two years; then, the amount will increase according to the Act 2.0
4. Maximum duration of the scholarship: 48 months

Required documents:

1. CV
2. Motivation letter
3. Master Thesis Certificate
4. Recommendation letter

For additional information about the project please contact: a.blitek@pan.olsztyn.pl